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(54) Processor capable of supporting two distinct instruction set architectures

(57) A microprocessor which supports two distinct instruction-set architectures. The microprocessor includes a mode control unit which enables extensions and/or limitations to each of the two architectures and controls the architectural context under which the microprocessor operates. The control unit controls memory management unit (MMU) hardware that is designed to allow address translation to take place under the control of a mode bit so that the translation mechanism can be switched from one architecture to another. A single MMU translates addresses of the two distinct architectures under control of the mode bit which is also used to simultaneously inform instruction decode which architecture is being used so that instructions are properly decoded. The MMU is also capable of mapping the address translation of one architecture onto that of the other so that software written for both architectures may be multi-tasked under the control of a single operating system.

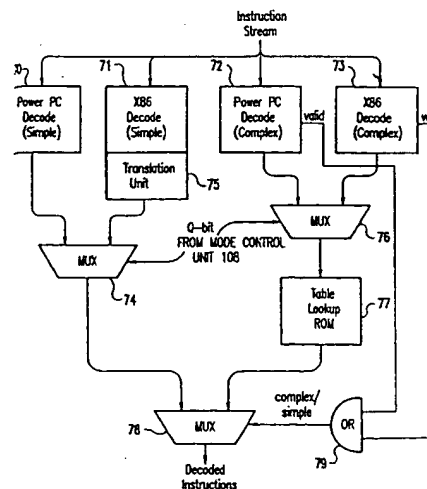


FIG. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 96 48 0073

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	EP-A-0 169 565 (NIPPON ELECTRIC CO) 29 January 1986 * the whole document *	1,6,7, 10,13-15	G06F9/318
A	EP-A-0 272 198 (UNITED TECHNOLOGIES CORP) 22 June 1988 * the whole document *	1,15	
A	EP-A-0 264 215 (AMDAHL CORP) 20 April 1988 * the whole document *	1,2,5, 12,15,16	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G06F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 November 1996	Examiner Klocke, L
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document</p>			

EP 0 FORM 150 (1.12.1994) (P.01/01)